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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/896,992
Filing Date: July 02, 2001
Appellant(s): WILLIAMS ET AL.

Stephen A. Terrile
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8 May 2008 appealing from the Office action mailed 8 January 2008.

(1) Real Part of Interest

A statement identifying by name the real part of interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after non-final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

NEW GROUND(S) OF REJECTION

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 2-16 and 48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Feldman et al. (U.S. 2002/0188496)

Hendrick et al. ("Production/Operations Management")

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

NEW GROUND(S) OF REJECTION

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 2-16 and 48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 2-16 and 48 are rejected under 35 U.S.C. 101 based on Supreme Court precedent, and recent Federal Circuit decisions, the Office's guidance to examiners is that a § 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780,787-88 (1876).

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Here, applicant's method steps, fail the first prong of the new Federal Circuit decision since they are not tied to another statutory class and can be performed without the use of a particular apparatus. Additionally, there is no transformation of the data performed by the method steps cited. Thus, **Claims 2-16 and 48** are non-statutory since they may be performed within the human mind and fail to positively recite a transformation of data.

The ground(s) for rejection are reproduced below from the Final Office Action, mailed 8 January 2008, and are provided here for the convenience of both the Appellant and the Board of Patent Appeals:

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-16 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (U.S. 2002/0188496) in view of Hendrick et al. ("Production/Operations Management").

As per **claim 2**, Feldman et al. teaches a method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility, the method comprising:

determining a set of components for an assembled product and storing the set of components (See paragraphs 10-11 and 43, wherein the bill of materials and components for final products are identified, as well as the suppliers of these components. See paragraphs 26, 34, and 45, which discloses a database that stores the inputs of the system);

The ability to store information related to components (See paragraphs 26, 34, and 45, which discloses a database that stores the inputs of the system); and

identifying potential risk due to potential disruptions in the continuity of material supply of the component, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power, geopolitical risks and capital cycle risks (See paragraphs 7, 14, 43, 45, 48, 86, and 89, which disclose risks associated with geography and political issues, as well as capital risks associated with financial value. See also paragraphs 11-12 and 38).

However, Feldman et al. does not expressly disclose innovation risks or determining a set of sub-components for the set of components and combining the set of components and the set of sub-components.

Hendrick et al. discloses:

determining a set of sub-components for the set of components (See pages 228-9 and page 231, figure 11-3, wherein subcomponents and subassemblies are determined); and

combining the set of components and the set of sub-components (See page 230-232, which discuss building a bill of materials and product structure trees by combining this information); and

creation risk (See page 230, where supplying vendors also receive supply for their produced components and build the deliverables given to the manufacturer who assemblies the final product).

However, Hendrick et al. does not expressly disclose innovation risk.

Both Hendrick et al. and Feldman et al. disclose components parts being supplied by a supplier so that an end product may be manufactured. Feldman et al. specifically identifies suppliers that supply the components to the manufacturer, as well as geopolitical and capital risks associated with this supplying. Feldman et al. further discloses bill of materials and identifying the components that are assembled to produce a final product. Hendrick et al. specifically discloses determining assembly and subassembly parts, generating bill of materials, and the problems that can possibly occur when procuring different parts from different outside vendors, such as the parts coming too early, too late, etc. It would have been obvious to one of ordinary skill in the art at the time of the invention to include subcomponents in the bill of materials and components of Feldman et al. in order to more efficiently meet the demand for the final product by more appropriately coordinating the components and subcomponents needed for the final product. See page 228-230 of Hendrick et al. which discloses these motivations.

Further, Feldman et al. discloses risks associated with suppliers that effect supply. Feldman et al. further states in paragraph 86 that other risk factors could affect the supply chain. Hendrick et al. discloses considering in the lead time it takes to get a component or subassembly from a vendor the time it takes for the supplying vendor to assemble and build the component or subassembly. It is old and well known that innovation is a type of creation performed by supplying vendors, especially in the field of electronics where the components rapidly change with time. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to consider

innovation in the creation component of lead time of Hendrick et al. in order to increase the accuracy of order scheduling by considering the risk on components and to final assembled products, thus ensuring that enough on-hand inventory is available to assemble the final product. See pages 230 and 232 of Hendrick et al., which discuss the importance of timing and available inventory when building an assembly. See also paragraphs 10, 13, and 86, of Feldman et al.

As per **claim 3**, Feldman et al. discloses storing the country of origin of the set of components (See paragraphs 7, 14, 43, 45, 48, 86, 89, wherein the geographic area and politics of the country are inputs to the system. See paragraphs 26, 34, and 45, where inputs are stored).

As per **claims 4 and 11**, Feldman et al. discloses storing an indicia of and evaluating geopolitical risk associated with the country of origin of the set of components, as well as based upon geographic concentration and a risk associated with a geographic location (See paragraphs 7, 14, 43, 45, 48, 86, 89, wherein the geographic area and politics of the country are inputs to the system, this including risk associated with politics and the geographic are of the supplier. See paragraphs 26, 34, and 45, where inputs are stored)

As per **claims 5 and 6**, Feldman discloses storing an identity of a supplier of the set of components and an assembler of the set of components (See paragraphs 43, 45, 49).

As per **claim 7,** Feldman et al. teaches determining a product assembled by a manufacturer, the product including the set of components (See paragraphs 43, 45, 49,

wherein the product is assembled by the manufacturer. See paragraphs 10-11 and 43, wherein the bill of materials and components for final products are identified).

As per **claims 8 and 14**, Feldman et al. does not expressly disclose end-of-life dates of components. Hendrick et al. teaches identifying risk associated with parts arriving too early, carrying costs, and net inventory taking into account inventory already held by the manufacturer (See pages 230 and 232). However, Hendrick et al. does not expressly disclose an end-of-life date of the set of components.

Both Hendrick et al. and Feldman et al. disclose components parts being supplied by a supplier so that an end product may be manufactured. Feldman et al. specifically identifies risks associated with supplied components, such geopolitical and capital risks associated with this supplying. Hendrick et al. teaches identifying risk associated with parts arriving too early, carrying costs, and net inventory. It is well known in inventory management that different resources, such as the paint of Hendrick et al., have shelf lives and thus must be used by a specified date, at which point they are no longer a usable resource. Thus, many companies account for these dates when ordering resources and considering on-hand balance. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to consider end-of-life date of the set of components when ordering needed components and subcomponents, in order increase the accuracy of order scheduling, thus ensuring that enough on-hand inventory is available to assemble the final product. See pages 230 and 232 of Hendrick et al., which discuss the importance of timing and available inventory when building an assembly.

As per **claim 9**, Feldman et al. teaches determining whether components are at risk due to the capital cycle risk, the capital cycle risk being determined by predictability of demand versus supply and capital flexibility (See paragraphs 7, 14, 43, 45, 48, 86, and 89 which disclose risks associated with capital risks associated with financial value and demand and supply issues. See also paragraphs 11-12 and 38).

As per **claim 10,** Feldman et al. teaches storing an identity of a fabricator of the set of components, wherein the identity of the fabricator includes the name of the foundry (See paragraphs 13, 49, 58, 65, 81, 84, and 89, wherein both parts are produced (i.e. fabricated) at facilities and supplied to a manufacturer, and where a manufacturer assembles parts and sections to fabricate the product).

As per **claim 12**, Feldman et al. discloses evaluating whether components from the set of components are implicated based upon an identified risk, such as risks associated with suppliers that effect supply (See paragraphs 14, 43, 45, 48, 86, and 89). However, Feldman et al. does not expressly disclose innovation risk.

Hendrick et al. teaches whether components from the set of components are implicated based upon an identified creation risk (See page 230, where supplying vendors also receive supply for their produced components and build the deliverables given to the manufacturer who assemblies the final product).

However, Hendrick et al. does not expressly disclose innovation risk.

Both Hendrick et al. and Feldman et al. disclose components parts being supplied by a supplier so that an end product may be manufactured. Feldman et al. discloses risks associated with suppliers that effect supply. Hendrick et al. discloses

considering in the lead time it takes to get a component or subassembly from a vendor the time it takes for the supplying vendor to assemble and build the component or subassembly. It is old and well known that innovation is a type of creation performed by supplying vendors, especially in the field of electronics where the components rapidly change with time. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to consider innovation in the creation component of lead time of Hendrick et al. in order to increase the accuracy of order scheduling, thus ensuring that enough on-hand inventory is available to assemble the final product. See pages 230 and 232 of Hendrick et al., which discuss the importance of timing and available inventory when building an assembly.

As per **claim 13**, Feldman et al. teaches evaluating whether components from the set of components are implicated based upon an identified risk due to a supplier concentration (See paragraphs 7, 14, 43, 45, 48, 86, and 89, wherein geographical area is considered, such as if 2 facilities are in the same area with the same risks (i.e. fault lines)).

As per **claim 15**, Feldman et al. teaches receiving a production plan and generating a material requirement plan for a component (See paragraphs 10-11 and 43, wherein the bill of materials and components for final products are identified, as well as the suppliers of these components).

As per **claim 16**, Feldman et al. discloses if quantities of the component are not available to support the material requirement plan for the components, identifying that

shortages of the component are possible (See abstract, paragraphs 7-8, 11, 57, wherein it is discussed the risk caused by components not being available).

As per **claim 48**, Feldman et al. teaches a computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility, the method comprising:

identifying a set of components for an assembled product (See paragraphs 10-11 and 43, wherein the bill of materials and components for final products are identified, as well as the suppliers of these components);

identifying potential risk due to potential disruptions in continuity of material supply of any components from the set components, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk (See paragraphs 7, 14, 43, 45, 48, 86, and 89, which disclose risks associated with the supplier, geography, and political issues, as well as capital risks associated with financial value. See also paragraphs 11-12 and 38).

However, Feldman et al. does not expressly disclose innovation risks or identifying respective sets of sub-components, the respective sets of sub-components being combined to provide a corresponding component of the set of components, each of the respective sets of sub-components comprising sub-components.

Hendrick et al. discloses:

identifying respective sets of sub-components (See pages 228-9 and page 231, figure 11-3, wherein subcomponents and subassemblies are determined);

the respective sets of sub-components being combined to provide a corresponding component of the set of components, each of the respective sets of sub-components comprising sub-components (See page 230-232, which discuss building a bill of materials and product structure trees by combining this information. See pages 228-9 and page 231, figure 11-3, wherein subcomponents and subassemblies are determined); and

creation risk (See page 230, where supplying vendors also receive supply for their produced components and build the deliverables given to the manufacturer who assemblies the final product).

However, Hendrick et al. does not expressly disclose innovation risk.

Both Hendrick et al. and Feldman et al. disclose components parts being supplied by a supplier so that an end product may be manufactured. Feldman et al. specifically identifies suppliers that supply the components to the manufacturer, as well as geopolitical and capital risks associated with this supplying. Feldman et al. further discloses bill of materials and identifying the components that are assembled to produce a final product. Hendrick et al. specifically discloses determining assembly and subassembly parts, generating bill of materials, and the problems that can possibly occur when procuring different parts from different outside vendors, such as the parts coming too early, too late, etc. It would have been obvious to one of ordinary skill in the art at the time of the invention to include subcomponents in the bill of materials and components of Feldman et al. in order to more efficiently meet the demand for the final product by more appropriately coordinating the components and subcomponents

needed for the final product. See page 228-230 of Hendrick et al. which discloses these motivations.

Further, Feldman et al. discloses risks associated with suppliers that effect supply. Feldman et al. further states in paragraph 86 that other risk factors could affect the supply chain. Hendrick et al. discloses considering in the lead time it takes to get a component or subassembly from a vendor the time it takes for the supplying vendor to assemble and build the component or subassembly. It is old and well known that innovation is a type of creation performed by supplying vendors, especially in the field of electronics where the components rapidly change with time. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to consider innovation in the creation component of lead time of Hendrick et al. in order to increase the accuracy of order scheduling by considering the risk on components and to final assembled products, thus ensuring that enough on-hand inventory is available to assemble the final product. See pages 230 and 232 of Hendrick et al., which discuss the importance of timing and available inventory when building an assembly. See also paragraphs 10, 13, and 86, of Feldman et al.

(10) Response to Argument

The applicants arguments have been fully considered but are not persuasive.

The applicant argues on pages 5 and 6 that the combination of the references

fails to teach identifying potential risk due to potential disruptions in material supply of a component from a set of components and the set of sub-components, as taught by claims 2 and 48. The applicant further alleges that the risks associated with geopolitical risk, capital cycle risk and innovation risk are not taught by the cited references.

The examiner respectfully disagrees.

The limitations are taught by a combination of the references. In the recent KSR decision, the court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art". In this case the claimed elements are found in the prior art.

Feldman teaches identifying potential risk due to potential disruption in material supply of a component from a set of components (see Figure 5G, here the potential disruption in terms of "Revenue at Risk" from components 1-3 due to a component shortfall). As noted previously, Feldman is focusing on the supply impact of components for a product. Feldman does not teach where the components are broken down into subcomponents. This feature is taught by Hendrick (see Figure 11-2 on page 229 – here a product is broken down into components and subcomponents). Hendrick teaches the need to break a product down into its subcomponent parts (the lowest level) because Hendrick is teaching the need to ensure that ALL parts are ordered to support a manufacturing operation. Hendrick is teaching Material Requirements Planning (MRP I) where the planning of acquisition for a product is discussed. This acquisition is the obtaining of all the parts, screws, materials, etc. necessary to build a product, because MRP I is the planning of obtaining all materials (i.e. components and sub components)

necessary to build a product in a manufacturing context.

As noted above, Feldman teaches a method where the supply risk, in terms of revenue, that would be incurred based on not being able to obtain certain components (i.e. a supply disruption). Applying Feldman's teaching, from a basis of looking at certain components, to those of Hendrick, which looks at all materials on a hierarchical bill of material (BOM - see page 228 column 1 middle para – all elements needed to make a product from a bill of material), would provide a predictable result because it would show the supply disruption due to risk of all components in the MRP I schema which accounts for all parts (components and subcomponents) necessary to build a product. Additionally, there is motivation to combine since a person performing MRP I would have the goal of ensuring that all parts to build a product are obtained. Modifying Feldman by the teachings of Hendrick would provide someone who is performing manufacturing planning the ability to determine what the impact is of not being able to obtain parts across the entire bill of material.

Applicant further argues that “geopolitical risk, capital cycle risk and innovation risk" as claimed is not taught. Examiner disagrees. These are mere labels identifying the risk and do not positively recite how they would impact the supply disruptions differently. Thus they are nonfunctional descriptive material. The examiner further notes that these limitations are taught in the reference as per paragraphs 7, 14, 43, 45, 48, 86, and 89, which specifically disclose risks associated with geography (location, earthquakes, fires, natural disasters, etc.) and political issues (see political risk insurance, wars, political turmoil, strikes), as well as capital risks (credit risk, etc.),

supplier power (labor availability, supply on hand, etc.). See also paragraphs 11-12 and 38)

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

This examiner's answer contains a new ground of rejection set forth in section (9) above.

Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid sua sponte dismissal of the appeal as to the claims subject to the new ground of rejection:

(1) Reopen prosecution. Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) Maintain appeal. Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR

41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted

Jonathan Sterrett
Examiner
Art Unit 3623
/JGS/
11 July 2008

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